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10/825,207	04/16/2004	Randall E. Messick	100203807-1	7669

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EXAMINER
HOFFLER, RAHEEM

ART UNIT	PAPER NUMBER
2165	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/825,207	MESSICK, RANDALL E.
	Examiner	Art Unit	
	RAHEEM HOFFLER	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 March 2008</u>.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-14 and 17-32</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-14 and 17-32</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>16 April 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Response to Amendment

The Office Action has been issued in response to amendment filed 27 March 2008. Claims 1-14 & 17-32 are pending. Claims 15 & 16 have been cancelled. Applicant's arguments have been carefully and respectfully considered in light of the instant amendment, and are not persuasive. Accordingly, this action has been made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 28-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 28-32 are vague and indefinite because the steps in the body of the claim recite the limitation of "means for…" which has been reasonably construed an the attempt by Applicant to invoke 35 U.S.C. 112, sixth paragraph. However, the metes and bounds of the claim have not been specifically defined for the limitation of "means for…" in the specification. The instant disclosure does not defined the structures necessary for each "means for 35 U.S.C. 112, sixth paragraph states that a claim limitation expressed in means-plus-function language "shall be construed to cover the

corresponding structure...described in the specification and equivalents thereof." "If one

employs means plus function language in a claim, one must set forth in the specification

an adequate disclosure showing what is meant by that language. If an applicant fails to

set forth an adequate disclosure, the applicant has in effect failed to particularly point

out and distinctly claim the invention as required by the second paragraph of section

112." In re Donaldson Co., 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir.

1994) (in banc). (See MPEP 2181 [R-2]). "As noted supra with respect to the rejections

under 35 USC 101, the "means" disclosed in the instant specification may be

interpreted as software alone, as disclosed in paragraph 57 of the instant specification.

However, software alone is not a "means" as it cannot, by itself, provide any

functionality."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

Claims 1-14, 17-19 & 21-32 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Numanoi et al (USPG Pub No. 20030220899A1; Numanoi

hereinafter) in view of Ledru et al (USPG Pub No. 20040162843A1; Ledru hereinafter)

further in view of Takeuchi et al (US patent No. 7200616B2; Takeuchi hereinafter).

As for Claim 1, Numanoi teaches a method for managing a storage area network

(SAN)" (see paragraph [0009], [0021]), comprising:

"receiving an alert related to a state of a device coupled to the SAN" (paragraph

[0023], "alert related to a state of a device coupled to the SAN", e.g., information

concerning the use situations of the storages for example use capacities of the storage,

the number of I/O operations of disk is collected);

"parsing the alert to identify the state of the device" (see paragraph [0024], the

collected information is analyzed "to identify the state of the device", e.g., prediction

values of the use capacity predicted after one week), comprising:

"determining a problem category" (see paragraph [0024], e.g., prediction values

of the use capacity predicted after one week),

"and determining action options" (see paragraph [0025-0026], when the

prediction values satisfy a predetermined condition, the system can establish the policy

prescribing how the system cope therewith, e.g., if the prediction value of the use

capacity of the disk device exceeds 100%, data is moved to another disk device),

"...comprising consulting an action rules database"(see FIG. 4, ACTION BOX 403,

paragraphs [0047-0057], "action rules database", e.g., ACTION 403, is consulted to

determine an action options);

"identifying an action required to correct a problem associated with the alert in response to the identified state of the device" (see FIG. 4, paragraph [0057], "action required to correct a problem associated with the alert", e.g., data is moved to another disk device, is identified by selecting the action in ACTION BOX 403);

"automatically performing the action <u>required</u> to correct the problem <u>by the server when</u> approval from <u>the</u> operator <u>is not required</u>" (see paragraph [0047-0056], "the action", e.g., data is moved to another disk device, is executed when the object satisfies the condition "to correct the problem", e.g., the use capacity of the disk device exceeds 100%. ACTION BOX 403 does not need "approval from an operator of the SAN").

The missing of Numanoi is the step of "identifying a notification message, wherein the notification message provides information related to the state of the device".

As disclosed by Ledru at FIG. 4, paragraphs [0037-0040], "a notification message", e.g., email, could be identified, wherein "the notification message provides information related to the state of the device", e.g., the severities of the device in box 410.

The missing of both Numanoi and Ledru are the steps of "determining whether the action required to correct the problem is performed automatically by a server"; "determining whether the action required to correct the problem is performed by an operator"; and "notifying the operator to perform the action to correct the problem when the operator is required to make a decision to correct the problem.".

Takeuchi explicitly recites the limitations "determining whether the action required to correct the problem is performed automatically by a server" (see col. 4, lines 12-49; col. 7, lines 63-67; col. 8, lines 1-9; e.g., a corrective action initiator works alongside a threshold risk value and sets a variety of markers such as "warning" and "danger" in order to perform corrective actions automatically or manually depending upon the severity of the marker given);

"determining whether the action required to correct the problem is performed by an operator" (see col. 4, lines 12-49; col. 7, lines 63-67; col. 8, lines 1-9; e.g., a corrective action initiator works alongside a threshold risk value and sets a variety of markers such as "warning" and "danger" in order to perform corrective actions automatically or manually depending upon the severity of the marker given);

"notifying the operator to perform the action to correct the problem when the operator is required to make a decision to correct the problem" (see col. 7, lines 63-67; col. 8, lines 1-9; e.g., notification to perform an action).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined automatic and manual notification of corrective actions as taught by Takeuchi with the email notifications as taught by Ledru into Numanoi method in order better evaluate risks according to the accessing of information of different types and notify an operator when the severity of a device is above a threshold.

As for Claim 2, Takeuchi teaches, "<u>providing suggestions to correct the problem</u>

<u>when the operator is required to make the decision to correct the problem</u>" (see col. 4,

lines 21-31; e.g., urging the occurrence of a specific action from an administrator or user

once a particular "marker" is determined through the calculation of the corrective action

initiator).

As for Claim 3, Ledru teaches, "sending the notification message to the operator"

(see paragraph [0028]).

As for Claim 4, Ledru teaches, "waiting on a response message from the

operator, wherein the response message directs performance of one or more action

steps"; "and directing execution of the action steps" (see paragraph [0007], [0028-

0032]).

As for Claim 5, Numanoi teaches, "one or more suggested action steps for

execution" (see paragraph [0048-0056]), but fails to explicitly recite, "the information in

the notification message". Ledru explicitly recites the limitation of "the notification

message" (see paragraph [0034], [0038]).

As for Claim 6, Numanoi teaches, "providing the operator with specific actions required to correct the problem" (see paragraph [0031], [0034], [0043] & [0048-0056]).

As for Claim 7, Numanoi teaches, "the information includes a report of automatic action steps completed" (see Fig. 5; see paragraph [0058]).

As for Claim 8, Ledru teaches, "the notification message is one of an e-mail message, a voice message and a voice-to-text message" (see paragraph [0034], [0038]).

As for Claim 9, Numanoi teaches, "A method for managing a storage area network (SAN) (see paragraph [0009], [0021]), comprising:

"receiving alerts from a management server, "monitoring states of devices coupled to the SAN"; "receiving an alert when a state of a device indicates a problem" (see paragraph [0024-0025], [0029-0031]);

"identifying a device subject to the alert"; "identifying action steps for correcting the problem"; "automatically performing the action steps to correct the problem (see paragraph [0024], e.g., prediction values of the use capacity predicted after one week).

The missing of Numanoi is the step of "a message processor and sending notification messages to operators"; "when an operator is not required to make a decision for correcting the problem"; "and sending the action steps to correct the problem to the operator when the operator is required to make a decision for correcting the problem".

As disclosed by Ledru at FIG. 4, paragraphs [0037-0040], "a notification message", e.g., email, could be identified, wherein "the notification message provides information related to the state of the device", e.g., the severities of the device in box 410.; when an operator is not required to make a decision for correcting the problem" (see paragraph [0028-0032]; e.g. notification contract);

The missing of both Numanoi and Ledru is the step of determining if the action steps for correcting the problem are required to be one of (1) performed by a server and (2) performed by an operator

As disclosed by Takeuchi, "<u>determining if the action steps for correcting the problem are required to be one of (1) performed by a server and (2) performed by an operator</u>" (see col. 4, lines 12-49; col. 7, lines 63-67; col. 8, lines 1-9; e.g., a corrective action initiator works alongside a threshold risk value and sets a variety of markers such as "warning" and "danger" in order to perform corrective actions automatically or manually depending upon the severity of the marker given);

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined automatic and manual notification of

corrective actions as taught by Takeuchi with the email notifications as taught by Ledru

into Numanoi method in order better evaluate risks according to the accessing of

information of different types and notify an operator when the severity of a device is

above a threshold.

        As for Claim 10, Takeuchi teaches, "<u>providing to the operator suggestions for</u>

<u>corrective actions for correcting the problem when the operator is required to make the</u>

<u>decision for correcting the problem</u>" (see col. 4, lines 21-31; e.g., urging the occurrence

of a specific action from an administrator or user once a particular "marker" is

determined through the calculation of the corrective action initiator).

        As for Claim 11, Numanoi teaches, "identifying action steps comprises:

determining if action is required; identifying the action to correct the problem; and

determining if the action is automatically performed by a management server" (see

paragraph [0023-0024], [0031-0032], [0034] & [0043]).

        As for Claim 12, Numanoi teaches, "if the action is automatic, initiating the action"

(see paragraph [0031], [0034], [0043]).

As for Claim 13, Numanoi teaches, "managing a storage area network (SAN),

comprising:

a management server that monitors states of devices coupled to the SAN (see

paragraph [0025]) and sends alert messages based on the states" (see paragraph

[0030-0031]),

"a receiver that receives the alert messages, a parser that analyzes the received

alert messages" (see paragraph [0023-0024]),

and an action rules database that specifies possible corrective actions for

correcting a problem associated with the alert, wherein the parser consults the database

to select one or more of the corrective actions" (see paragraph [0023-0024], [0030-

0034], [0048-0056]).

The missing of Numanoi is the step of "a message processor", "notification

messages", and "a formatter/addresser that formats and addresses the notification

messages".

Ledru explicitly recites, "a message processor", sending notification messages"

(see paragraph [0028-0032], [0034], [0038]), and "a formatter/addresser that formats

and addresses the notification messages (see Fig. 3-4; see paragraph [0028]; e.g. "user

interface"), and a transmitter that sends the notification messages to messaging

devices" (see paragraph [0034], [0038]);

The missing of both Numanoi and Ledru is the step of "wherein the possible

corrective actions include actions to be initiated automatically by the message

processor and actions requiring approval of a system administrator receiving a

notification message that includes suggestions to correct the problem".

Takeuchi explicitly recites, "wherein the possible corrective actions include

actions to be initiated automatically by the message processor and actions requiring

approval of a system administrator receiving a notification message that includes

suggestions to correct the problem" (see col. 4, lines 12-49; col. 7, lines 63-67; col. 8,

lines 1-9; e.g., a corrective action initiator works alongside a threshold risk value and

sets a variety of markers such as "warning" and "danger" in order to perform corrective

actions automatically or manually depending upon the severity of the marker given);

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to have combined automatic and manual notification of

corrective actions as taught by Takeuchi with the email notifications as taught by Ledru

into Numanoi method in order better evaluate risks according to the accessing of

information of different types and notify an operator when the severity of a device is

above a threshold.

As for Claim 14, Numanoi teaches, "file parser consults the database and uses a

state of a device to determine action options" (see paragraph [0023-0024], [0031],

[0033-0034], [0043]; whereas Numanoi teachings of agents performing the function of

checking the status of the devices and reporting to a variety of different units, such as

the condition judgment unit and the action execution unit).

As for Claim 17, Ledru teaches, "the formatter/addresser formats the alert

messages for receipt by one or more of a Web browser, a mobile phone, and a

telephone" (see Fig. 3-4; see paragraph [0028]; e.g. "user interface").

As for Claim 18, Numanoi teaches, "the management server initiates automatic

corrective action based on a monitored state of a device (see paragraph [0025], [0029],

[0034] & [0043]), but fails to explicitly recite, "a notification message indicates the action

taken by the management server". Ledru explicitly recites, "a notification message

indicates the action taken by the management server" (see paragraph [0028], [0048],

[054]).

As for Claim 19, Ledru teaches, "the alert messages are e-mail messages" (see

paragraph [0034], [0038]).

Claims 21-27 differ from Claims 1-7 in that claims 21-27 computer readable

medium whereas claims 1-7 are method claims. Thus, claims 21-27 are analyzed as

previously discussed with respect to claims 1-7 above.

Claims 28-32 differ from Claims 13-17 in that claims 28-32 message-based

system claims dependent on base claim 28 whereas claims 13-17 are message-based

system claims dependent on base claim 13. Thus, claims 28-32 are analyzed as

previously discussed with respect to claims 13-17 above.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Numanoi et al (USPG Pub No. 20030220899A1; Numanoi hereinafter) in view of Ledru

et al (USPG Pub No. 20040162843A1; Ledru hereinafter) further in view of Primm et al

(US Patent No. 7095321B2; Primm hereinafter)

As for Claim 20, Numanoi teaches SAN management and Ledru teaches an alert

and notification system. Both Numanoi and Ledru fail to explicitly recite, "a lightweight

directory access protocol (LDAP) database". Primm teaches, "a lightweight directory

access protocol (LDAP)" (see col. 4, lines 11-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to have combined a lightweight directory access protocol (LDAP) database

taught by Primm with the alert and notification system of Ledru and the SAN management

taught by Numanoi because an improved method and system for sensor monitoring, alert

processing, and notification would be desirable.

Response to Arguments

Applicant's arguments, filed 27 March 2008, with respect to rejections under 35

USC 101 & 112, have been fully considered and are persuasive. Claim rejections to

Claims 13-14, 17-20 & 28-32 under 35 USC 101 have been withdrawn due to

amendment. Rejection of Claim 9 under 35 USC 112 has been withdrawn due to

amendment, however, rejection of Claims 28-32 under 35 USC 112 2nd paragraph in

view of 6th paragraph has been maintained.

With respect to Applicant's argument that:

"Each of the independent claims recites one or more elements that are not taught or suggested in Numanoi in view of Ledru and Prinml. These missing elements show that the differences between the combined teachings in the art and the recitations in the claims are great. As such, the pending claims are not a predictable variation of the art to one of ordinary skill in the art.

As one example, independent claim 1 recites determining whether the action required to correct the problem is performed automatically by a server and determining whether the action required to correct the problem is performed by an operator. The claim then recites automatically performing the action required to correct the problem by the server when approval from the operator is not required; and notifying the operator to perform the action to correct the problem when the operator is required to make a decision to correct the problem. The art of record does not teach these elements.

In Numanoi, agents in servers collect information concerning usage capacity. This information is transmitted to a management server for analysis. The management server then executes an action (such as moving data to another disk). Nowhere does Numanoi teach or even suggest determining whether the action required to correct the problem is performed by an operator. Further, nowhere does Numanoi teach or suggest notifying the operator to perform the action to correct the problem when the operator is required to make a decision to correct the problem. Again, Numanoi teaches that the management server corrects the problem.

Ledru teaches a user interface so a user can send a notification contract to a monitoring application. This notification contract includes criteria under which the user wants to be notified by the

monitoring application. Nowhere does Ledru teach or even suggest determining whether the action required to correct the problem is performed by an operator. Further, nowhere does Ledru teach or suggest notifying a user to perform an action to correct a problem when the user is required to make a decision to correct the problem.

The differences between the claims and the teachings in the art are great since the references fail to teach or suggest all of the claim elements. As such, the pending claims are not a predictable variation of the art to one of ordinary skill in the art.

For at least these reasons, the claims are allowable over the art of record."

Examiner is not persuaded. Applicant's arguments have been considered but are not persuasive in view of the new ground(s) of rejection. The newly added reference of Takeuchi, (see col. 4, lines 12-49; col. 7, lines 63-67; col. 8, lines 1-9), teach of a corrective action initiator that works alongside a threshold risk value and sets a variety of markers such as "warning" and "danger" in order to perform corrective actions automatically or manually depending upon the severity of the marker given. If the "marker" of severity is set low enough, an indication of error is sent to an operator and the urging or suggesting of various actions takes place.

With respect to Applicant's argument that:

"**Regarding claim 28-32, the Examiner asserts that the use of means makes the claims indefinite. Applicants respectfully disagree. As explained above, claims 28-32 must be interpreted in light of the disclosure. The first element of claim 28 recites a means for monitoring states of devices. The specification describes this means as a management server (see FIG. 1A, #100). Hence, the claim is not indefinite since the specification and drawings clearly show an embodiment for this means. The other means elements in claim 28 include a messaging processor (see FIG. 1C, #300). Hence, the claim is not indefinite since the specification and drawings clearly show an embodiment for these means.**

For at least these reasons, Applicants respectfully ask the Examiner to withdraw the rejections under 35 USC § 112, second paragraph."

Examiner is not persuaded. Examiner maintains that the Specification does not

provide support for each "means for" function within the claim language. It should be

clearly interpreted within the specification on how each component mention is intended

to perform its function.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to RAHEEM HOFFLER whose telephone number is

(571)270-1036. The examiner can normally be reached on 7:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Christian Chace can be reached on (571) 272-4190. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. H./
Examiner, Art Unit 2165

/HUNG Q PHAM/
Primary Examiner, Art Unit 2168